SBR No. 18/22-23
DATED 05/09/2022

EE/ELE/Y/BR No. 18/22-23
Dt. 05/09/22

Original/Duplicate/Triplicate

CONTRACT CERTIFICATE

(For Other Works)

No. I & Final bill Date……2010

Division: **Electrical (yelahanka)** Sub-Division: **Electricals**

Bill Received No. Dated Divisional Cash Book Voucher No…….. Dated……

Sub Divisional **Job Code :-005-21-000094**

Schedule Docket No. Head of Account : P-CODE:P0300 D.R.No. :

Name of Work:- Providing illumination in REVA College Junction,Bellahalli Junction Hegadenagara Main Road, Bharati City Junction, Agrahara Junction of Hegadenagara Main Road in Chikkajala Traffic police limit Ward No 05

Name of Contractor and Full Address: **M/s Powermac.**

Reference to Agreement No:- EE(ele)/YZ/W.O/000003/2021-22 Date 17/11/2021

Certified that the measurements were taken by me on 7/6/22 and recorded of Pages 257312 to 7316 of measurement Book No. 2574/21-22 and that the work is satisfactorily executed.

FOR POWER MAC

Rev

Contractor

T.C.N. Bangalore

Officer-in-charge of work

Certified that the measurement were taken by me on 7/6/22 and found correct. The work is satisfactorily executed.

Proprietor

Certified that the quantities of materials shown in column 3 of Account have been actually brought to site of the work and the contractor has not previously received any advance on this security. These materials are of and imperishable nature and are all required for immediate use on the work in connection with items for finished work have been agreed upon. A normal agreement signed and executed by the contractor is recorded in the office.

Assistant Executive Engineer (Ele)
Sub Division Office

II Memorandum of Payment

1) Total value of work done or supplies made as per account within	Bill Amount	1341953:00
2) Deduct amount to be held in reserve being ……percent Rs……	IT 1%	13420:00
3) " Balance	LWC 1%	13420:00
4) Deduct Payment:	CBFO 1%	1342:00
a) Amount of previous payment as in the Office Cash Book Voucher No……Dated……S.D. No…… Amount adjusted towards cash advance recovery of	CGST 1%	12167:00
b) Payments Now made: cost store or other material supplied. recovery of amount creditable to this/other work. Amount paid on this bill Cheque / Cash.	SGST 1%	12167:00
	Fine	12091:00
5) Balance being unpaid value of work done held in reserve.	FSD 2.5%	33549:00
6) Deduct cash advance made on the Office cash Book Voucher No…… dated……less adjustments.	unadjustments items.	
7) Net amount due to or from Contractor	Deduction	98156:00
8) Advance to Contractor for materials brought to site (as detailed) within.	Total amount adjusted	
9) Value of Government materials supplied.	Payee	1243797

FOR POWER MAC

Contractor's Signature

Received Rs…… (in words)……

……

by cash and by adjustment of Payment as per memorandum (in final settlement of all demands)

(For use in the Office)

Witness
1. FOR POWER MAC
Rev
2.

Dated Signature of Contractor

Paid by me by Cheque No……Dated……

Cash Rs……Proprietor…

Dated……

Initials of Officer making payment

Stamp

Proprietor

ಶೀರ್ಷಿಕೆ PO300 Maind R to Street

ರೂ:1341953:00 ಆಡಿಟ್ ಮಾಡಿ ಸ್ವೀಕರಿಸಿದೆ

ರೂ:1243797:00 ಚೆಕ್ ನೀಡಬಹುದಾಗಿದೆ

ರೂ:98156:00 ಹೊಂದಾಣಿಕೆ ಮಾಡಿದೆ

S. Sooryavanshi

ಲೆಕ್ಕ ಅಧೀಕ್ಷಕರು

Executive Engineer

ಕಾ.ಪಾ.ಅ.(ವಿ) ಯಲಹಂಕ ವಲಯ

Sl. No	Description
	Name Of Work:- Providing illumination in REVA College Junction,Bellahalli Junction Hegadenagara Main Road, Bharati City Junction, Agrahara Junction of Hegadenagara Main Road in Chikkajala Traffic police limit Ward No 05
1	Fabrication, Supplying, Erection, Testing and Commissioning of .....Mtrs long polygon high mast with Single / Multiple telescopic sections having, (minimum overlap distance of 1.5 times of top section) thickness as per BSEN 10025 grade S 355 JO /ASTM A572-50 steel sheet plate for shaft suitable to withstand a wind velocity of 47 m/sec as per IS 875 part 3(as per GA Drawing).Base plate as per IS 2062/ASTM A572-50. The mast shall be Galvanized in single Hot-dip as per BSEN ISO 1461/ASTM A123 with an average 70 microns as per IS 2629, and welded as per BS 5135 Single L-Seam joint. The mast shall have 2way head frame with die cast LM-6 pulleys, stainless steel axle, Phosphorus Bronze bearing bush press-fitted with separate guides for 2 runs of 5mm dia, stainless steel wire rope of AISI 304grade 7/19-core, (Factor of Safety as per TR no-7). 2.5sqmm EPR insulated PCP sheathed trailing power cable housed inside the bottom shaft of mast with door having locking arrangement. The mast shall have manual / power tool (Suitable reversible geared motor operating on 230/ 415V, 50Hz, shall be provide above 15 Mtrs mast) The mast shall have lantern of 2 segments, suitable dia with max load carrying capacity as per IS 1239. The mast shall be erected on existing RCC footing. The mast shall be supplied with 3mm thick template, lightning arrester of 1.2m length galvanized pipe with top arrow fitted on top of the head frame cover and GLS type aviation twin lamps fitting with wiring complete. (excluding foundation) as per technical data.**16 Mtrs - Top 150mm and bottom 410 mm dia**
2	Fabrication, Supplying, Erection, Testing and Commissioning of .....Mtrs long polygon high mast with Single / Multiple telescopic sections having, (minimum overlap distance of 1.5 times of top section) thickness as per BSEN 10025 grade S 355 JO /ASTM A572-50 steel sheet plate for shaft suitable to withstand a wind velocity of 47 m/sec as per IS 875 part 3(as per GA Drawing).Base plate as per IS 2062/ASTM A572-50. The mast shall be Galvanized in single Hot-dip as per BSEN ISO 1461/ASTM A123 with an average 70 microns as per IS 2629, and welded as per BS 5135 Single L-Seam joint. The mast shall have 2way head frame with die cast LM-6 pulleys, stainless steel axle, Phosphorus Bronze bearing bush press-fitted with separate guides for 2 runs of 5mm dia, stainless steel wire rope of AISI 304grade 7/19-core, (Factor of Safety as per TR no-7). 2.5sqmm EPR insulated PCP sheathed trailing power cable housed inside the bottom shaft of mast with door having locking arrangement. The mast shall have manual / power tool (Suitable reversible geared motor operating on 230/ 415V, 50Hz, shall be provide above 15 Mtrs mast) The mast shall have lantern of 2 segments, suitable dia with max load carrying capacity as per IS 1239. The mast shall be erected on existing RCC footing. The mast shall be supplied with 3mm thick template, lightning arrester of 1.2m length galvanized pipe with top arrow fitted on top of the head frame cover and GLS type aviation twin lamps fitting with wiring complete. (excluding foundation) as per technical data.**12Mtrs/12.5Mtrs - Top 100mm and bottom 310 mm dia**
3	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains. Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm.Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source.LED Floodlight 240W
4	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.
5	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 5) 3.5 core 25 sqmm
6	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required. 7) 25 sqmm to 75 sqmm
7	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) 2) In soil (Hard)

evious Measurement		Present Measurement			Total Upto Date		Remarks
Qty	Cost	Qty	Rate	Amount	Qty	Cost	
		2	118131.20	236262.40	2	236262.40	
		2	88598.40	177196.80	2	177196.80	
		24	15437.60	370502.40	24	370502.40	
		24	146.82	3523.68	24	3523.68	
		296	151.02	44701.92	296	44701.92	
		296	29.36	8690.56	296	8690.56	
		146	85.58	12494.68	146	12494.68	

8	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. 2) 50x50x6mm
9	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics) THREE POLE 1) 100Amps 25kA.
10	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers. 4) 100Amps
11	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete. 1) 14SWG
12	Supplying and fixing hylum plastic sheet 3mm thick with necessary nitches for fixing switches, regulators etc., and fixing on existing wood or metal box using N.F. screws.
13	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694.confirming to latest amendments.10. sqmm
14	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3 of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 12 mm dia
15	Supplying and running of GI/Copper strips for grounding connections, using necessary fixing materials as required.25x3mm GI strip
16	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV.40mm
17	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.25Sqmm
18	Providing RCC Foundation for 12 Mtrs Mini high mast Datarate As per The Drawing and Civil estimate enclosed
19	Thiristor based single/ Three phase smart street light control and monitoring system Remotely control and and monitorable smart street light system by using web or mobile application .smart control system has hardware ruggedness over field issues like line cross, line short, lighting and any other irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise lighting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking. It works on the basis of some of these features 1) Main Control Unit (Mother board) : Handles controlling , data handling and other communication process. 2) Communication unit: GSM/GPRS quad bandwith RS232 interface wireless communication unit 3) Gate Driver Unit: Firing angle controllable board for driving the thyristor 4) Switching Thyristor: SCR 110 AMPS dual thyristor modules for switching 5) Embedded Firmware: Firmware to control , handle , process the data and communicate it wirelessly.6) Metal Enclosure : IP66 weather prof metal enclosure.7) Transformers: Customized step down transformers for various purposes.8) Wiring and other device assembly components.
20	Laying of UG Cables by trenchless technology by adopting horizontal boring & Drawing of cable including preparation at site With HDPE Pipe i) Normal soil 5/6" bore size
	Total Rs
	GST Charges (12% on SR Electrical items) Item No 01 to 18
	Total Rs

Certificate: 1. Certefied that the Above Work has been carreid out satisfactorily

Assistant Executive Engineer (Ele)
BBMP, Bangalore

	32	276.87	8859.84	32	8859.84	
	4	3800.67	15202.68	4	15202.68	
	8	292.81	2342.48	8	2342.48	
	117600	0.34	39984.00	117600	39984.00	
	30000	0.20	6000.00	30000	6000.00	
	30	96.48	2894.40	30	2894.40	
	4	2516.75	10067.00	4	10067.00	
	17	62.92	1069.64	17	1069.64	
	15	281.06	4215.90	15	4215.90	
	4	293.65	1174.60	4	1174.60	
	4	24668.28	98673.12	4	98673.12	
	4	43208.50	172834.00	4	172834.00	
	0	711.47	0.00	0	0.00	
			1216690.10		**1216690.10**	
1043856.10			125262.73		125262.73	
			1341952.83		**1341952.83**	